

A³ surface of the hardened preform as thick as 1.5 times of maximum thickness of the hardened preform when carbonization and heat processing are performed in the step 2).

A⁴ 10. (Amended) The method according to either claim 1 or claim 4 further comprising a step of coating boron nitride compound composed of 70~80% BN, 10~20% acetone, and 0~10% water on the surface of hardened preform after the step 3) is finished.

Please add Claim 11 as follows:

A⁵ --11. (New) The method according to Claim 1 which includes the step of forming an anti-oxidation layer on the surface of said hardened and carbonized preform by introducing gaseous SiO₂ to react with any remaining unreacted carbon and silicon, while heat-processing said hardened and carbonized preform within temperature range of 2000°C – 2700°C. --

REMARKS

In the Office Action the Examiner has rejected claims 1-10 under 35 U.S.C. §112, second paragraph, as allegedly failing to particularly point out and distinctly claim the subject matter of the invention. The Office Action admits that the subject matter of the claimed invention is free of prior art, and has only objected to Claims 2-10, indicating that the subject matter therein would be allowable if rewritten in independent form.

With respect to the rejection of Claim 1 under 35 U.S.C. §112, second paragraph the Office Action has raised several issues. First, the Examiner has alleged that there is no antecedent basis for the phrase “the phenolic resin” in step 2 of Claim 1. Also, the Examiner has alleged that step 4 of Claim 1 and line 2 of Claim 2 contain grammatical errors. Additionally, the Examiner has alleged that the phrase “hardened test piece” in Claims 5 and 6 and the phrase “test piece” in Claims 8 and 10 lack antecedent basis.

Claim 1 has been rewritten to define with greater particularity the subject matter recited therein. In addition, Claim 1 has been amended to recite that step 4) is optional. Support for this latter amendment is found in original Claim 4.

Further, the Examiner has advised that in Claim 2 the phrases “2 dimensional” and 3 dimensional” should be changed to “2- dimensional” and 3-dimensional.” Claim 2 has been hereinabove amended to make this change.

Claims 5, 6, 8, and 10 have been amended by replacing phrase “test piece” with the term “preform”. This term has antecedent basis in Claim 1.

These amendments do not narrow the scope of the claimed subject matter.

Claim 11 has been added; it is directed to the method wherein step 4) in Claim 1 is performed. Support is found in Claim 1.

No new matter has been added to the application.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned “Version with markings to show changes made.”

The amendments to the claims overcome the rejection of Claim 1 under 35 U.S.C. §112, second paragraph. Withdrawal thereof is respectfully requested.

Since the amendments herein overcome the rejection of Claim 1, it is respectfully submitted that Claims 2-10 are no longer dependent on a rejected claim. Therefore, the objection to Claims 2-10 is overcome; withdrawal thereof is respectfully requested.

Thus, in view of the amendments to the claims, it is respectfully submitted that the present case is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Mark J. Cohen', written in a cursive style.

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“VERSION WITH MARKINGS TO SHOW CHANGES MADE”

IN THE CLAIMS:

Please amend Claims 1, 2, 5, 6, 8, and 10 as follows:

1. (Amended) A method for manufacturing carbon/silicon-carbide composite comprising the steps of:

- 1) hardening a stacked carbon/phenolic preform;
- 2) subjecting said preform to carbonizing [the phenolic resin] and heat processing [the perform until the temperature reaches at] conditions, up to 2300°C, sufficient to carbonize said preform;
- 3) [infiltrating and] sintering said hardened and carbonized preform by infiltrating it with liquid metal silicon between the temperatures of 1400°C and 1800°C; and
- 4) [inducting a compound including SiO₂ to gas phase and ultra-high heat processing the compound while forming an anti-oxidant layer on surface] optionally forming an anti-oxidation layer on the surface of said hardened and carbonized preform by introducing gaseous SiO₂ to react with any remaining unreacted carbon and silicon, while heat-processing said hardened and carbonized preform within the temperature range of 2000°C ~ 2700°C.

2. (Amended) The method according to claim 1, wherein the carbon/phenolic preform is [one of those preform made by press molding, preform made by internal and external compression in tape wrapping, 3 dimensional perform made by sewing the 2

dimensional fabrics with thermal resistant fiber, or preform made by involute method]
prepared by a method selected from the group consisting of:

press molding, tape wrapping with internal and external compression, sewing
2-dimensional fabrics with thermal resistant fiber to make a 3-dimensional preform, and the
involute method.

5. (Amended) The method according to either claim 1 or claim 4, wherein a discharge passage of dissolute gas is made by making holes on the hardened [test piece] preform in step 2).

6. (Amended) The method according to claim 5, wherein the discharge passage is made by making holes of 0.5mm~1.5mm diameter with 5mm~20mm interval if the hardened [test piece] preform is rectangular box shape.

8. (Amended) The method according to either claim 1 or claim 4, wherein graphite and coke powder are put into a graphite box with a hole and wrap up the entire surface of the [test piece] hardened preform as thick as 1.5 times of maximum thickness of the [test piece] hardened preform when carbonization and heat processing are performed in the step 2).

10. (Amended) The method according to either claim 1 or claim 4 further comprising a step of coating boron nitride compound composed of 70~80% BN, 10~20% acetone, and 0~10% water on the surface of [test piece] hardened preform after the step 3) is finished.